Inquiry on Federal Water Policy
Research Paper # 10

PUBLIC INFORMATION AND PUBLIC PARTICIPATION IN WATER RESOURCES POLICY

by

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THE INQUIRY ON FEDERAL WATER POLICY

The Inquiry on Federal Water Policy was appointed by the federal Minister of the Environment in January of 1984 under the authority of the Canada Water Act. The members were Peter H. Pearse, chairman; Françoise Bertrand, member; and James W. MacLaren, member. The Inquiry was required by its terms of reference to review matters of water policy and management within federal jurisdiction and to make recommendations.

This document is one of a series of research papers commissioned by the Inquiry to advance its investigation. The views and conclusions expressed in the research papers are those of the authors. Copies of research papers and information on the series may be obtained by writing to the Enquiry Centre, Environment Canada, Ottawa, Ontario K1A 0H3.

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Abstract

This paper includes a review of recent events and the results of a workshop discussion of public consultation issues with respect to federal water policy. Several suggestions are directed toward improvement of Environment Canada's public information and participation programs, and a national water commission is proposed. This Commission might, among other things, work with all levels of government to develop better public understanding of Canada's future issues and options.

Résumé

Ce rapport présente une revue des récents développements dans le domaine de la consultation du public de même que les résultats d'un atelier de travail sur les questions de consultation du public en ce qui a trait à la politique fédérale relative aux eaux. Plusieurs suggestions visant à l'amélioration des programmes d'information et de participation du public financés par Environnement Canada sont faites et une commission nationale de l'eau est proposée. Cette commission pourrait, entre autre, travailler avec tous les ordres de gouvernements afin de développer une meilleure compréhension des problèmes et options futures au Canada.

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1. ACKNOWLEDGEMENTS:

In early 1985, after several discussions with Inquiry members and staff, I was asked to organize a small workshop to discuss the issues with respect t public information and public participation in the development of water resources policy and to present the findings of the workshop, together with other relevant materials, in the form of a brief report. This is the result.

At the workshop, fourteen people were brought together at the Cara Inn in Toronto, on February 4 and 5, 1985, to discuss the present situation, to define a more desirable future state of affairs, to discuss policy options and to make recommendations to the Inquiry.

The workshop members deserve credit for the ideas generated. The errors and omissions are mine.

2. INTRODUCTION:

Democratic societies require accurate and timely public information if they are to function properly. Public information and public participation allow the population to engage between elections in the process of policy development. There is general agreement in democratic societies that all areas of policy should be open to public review and reaction and that such participation usually results in better public policy, a more knowledgeable and contented electorate and more responsible government.

The environment is Canada's most pervasive reality. Not only does Canada have more environment per capita than any other nation, but we have an uniquely sensitive and inhospitable environment which requires substantial adaptation in human habits to be endurable and still other adaptations to render it sustainable under the pressures of population growth and rising expectations. The Inuit have survived for several thousand years in Canada's north and the Indians further south by creative adaptation to the environment. The environment was one of the pressures which maintained population at a low level in relation to land and water area. European settlers have greatly expanded output and numbers in the more hospitable parts of Canada and have subjugated nature to the point where traditional customs cannot be expected to yield a satisfactory living. The result is a society in the north which is not sustainable, based on present expectations and

population size, and which must be heavily subsidized from the south.

The analogy with the arid southwestern United States is clear. Vast growth in the Great Plains region, Colorado, New Mexico, Arizona and California has resulted from the flight of people of European culture to the arid "sunbelt" where new cultural patterns have been introduced. Intensive agriculture, dependent on large amounts of water, has expanded rapidly. The result is a society which is sustainable only if huge amounts of water can be added to the natural annual input. Until now, the water has been found by drawing on underground storage and the supply developed over thousands of years is being used in the space of less than one hundred. The sustainability of the U.S. sunbelt in the long run depends either on the abandonment of irrigated agriculture, on water subsidization of a massive kind, or on some combination of the two.

North America is a continent with the richest economy and population on Earth, which will have a population of nearly 600 millions by the year 2050. Of this number, about 35 millions will probably live in Canada; 375 millions in the U.S., of whom about half will be of Spanish and Mexican heritage and perhaps 200 millions in Mexico. The fastest growth in population will take place in the southern U.S., if sufficient water can be found or diverted there.

The Canadian prospect is not cheerful. Acid rain may decimate

Eastern Canadian forests before the causes are cleared up. One-half of the acid originates in Canada, one-half in the United States. No firm commitments have been made in the U.S. to do anything more than to study the problem. Water diversions from Lake Michigan to the Mississippi system have long been permitted and expanded diversions will be largely beyond Canadian control. There will be great pressure to expand diversions from the Great Lakes through Lakes Michigan and Erie to the point where system levels could only be maintained by damming the Severn, the Albany and the Winisk Rivers which empty into Hudson Bay, thus forcing fresh water back into the Great Lakes. The 50,000 Indians who would be dispossessed will have difficulty bargaining with the more than one hundred million beneficiaries in the United States, even with full support from all 25 million Canadians.

Similarly, plans for the North American Water and Power Alliance are being dusted off. Developed by Ralph M. Parsons Associates of Denver, in 1960, it proposed to dam the Liard, Slave and MacKenzie River systems and other north-flowing rivers to force water southward along the Rocky Mountain trench to replace the depleted reservoirs of the Great Plains and the California Lowland. The scheme may be technically feasible. The losers would be northern peoples and the beneficiaries would be southern peoples of this continent. The lack of warm spring waters, flowing into the Beaufort Sea at breakup, could retard the arrival of spring in the Arctic by some weeks and might well change the climate of Canada and the northeastern United States. The

project would flood vast areas of the north, displacing large numbers of native people and destroying wildlife habitat, both for native species and migratory birds which summer in the north and winter in the south.

It is for these reasons, among others, that the Inquiry on Federal Water Policy was created, and it is for these reasons that public information and public participation in the field of water resources planning will be so critical to the formulation of sound water resources policy in Canada and the United States in the next few years.

3. BACKGROUND TO THE REPORT

Early in 1985, the Inquiry asked me to proceed with a small Search Conference on the subject of public information and public participation. Participants were selected by Inquiry members and staff to represent key publics with an interest in the subject. With the help of Inquiry on Federal Water Policy and Environment Canada staff members, a Background Document was assembled and mailed to participants for their review before attending the Search Conference. An index of readings and a list of participants is attached.

The readings attempted to provide the knowledgeable public interest group representatives with some provocative ideas about current trends in environmental thought; the results of recent public opinion surveys; a review of strategies for public information and participation and a number of viewpoints about public information and participation which have been submitted to the Inquiry. Some highlights from the Background Document are summarized in the following sections, but the interested reader is invited to obtain a copy from the Inquiry office or from Environment Canada.

The workshop itself opened with a presentation by Charles Fremes of Decima Research and involved nearly two days of intensive discussion. The results of recent CROP and Canadian Trend surveys are summarized in Chapter 5 and the workshop proceedings including

introductory comments from the Decima polls, are summarized in Chapter 6.

4. THE EVOLUTION OF PUBLIC INFORMATION AND PUBLIC PARTICIPATION IN THE RESOURCES AREA

The terms "public information", "public involvement" and "public participation" have a variety of meanings in the literature. In general, public information is delivered by the responsible public authority or private interest group to the public. It is usually characterized as a "top-down" process, since information flows from the "top" to the "people" or "constituencies" or "publics". Public involvement usually refers to widespread information and discussion programs relating to a broad public issue (toxic waste management, plant modernization, etc.). It is also "top-down". Public participation usually describes a process in which large numbers of people and organizations are drawn into an exchange between the public or private agency (Berger Inquiry, Hartt Commission, Ontario Waste Management Corporation) and the individuals or interest groups most directly affected. Information flows upward from "publics" to the "top", as well as downward to the publics. Usually, although not always, public participation refers to specific proposed policy, legislation, regulation or action with direct and immediate effects on people or the natural environment.

Public participation in Canada has become an accepted part of the process of making major social and institutional choices since the early 1960s. Most Canadians support the idea that those who will be

affected by decisions should have a role in making them. There is somewhat less support for the "professional" public participation bodies which specialize in mobilizing local citizens whenever a proposed policy or program emerges in their area. There has also been an evolution in public participation efforts since the 1960s, when confrontation was the principal mode of intervention by the affected publics, to more complex forms of extended participation, environmental mediation and even "bidding" for projects among the communities which might receive the potential benefits.

Public discussion of broad, national resource issues has been spotty. A series of conferences was held at the Banff Centre from 1980 to 1984, covering such topics as: Forestry in Canada; Canadian Water Resources; Northern Conservation (held in Whitehorse); Environmental Protection vs. Development; and Transforming Western Agricultural After the Crow. These events have engaged key decision-makers from across the country in searches for sound long-term policy for a sustainable natural resources base and a protected natural environment in Canada and have had some lasting impact on policy. For example, the Task Force on Northern Conservation was created as the direct result of the Whitehorse conference on northern conservation.

In the international field, the Great Lakes Institute, formed in the 1950s by Dr. George Langford and others, led to the formation of the Canada Centre for Inland Waters, devoted to physical research with

respect to the Great Lakes. In the early 1970s, there was extensive discussion of the concept of mobilizing cross-national constituencies around the Great Lakes region to influence state, provincial and national planning on both sides of the border.

Public participation techniques are numerous, but there has been little effort to evaluate their effectiveness. This is partly because several techniques may be used in a particular case and partly because it is extremely difficult to determine what factors led to a particular outcome and what weight should be given to the role of public participation. Managers of public participation programs should know and understand the strengths and limitations of various techniques, should specify the goals they hope to achieve and should then choose those techniques which will achieve their goals at least cost.

There are a number of serious constraints on the effectiveness of public participation in water resources planning . First, public participation does not transfer the authority and duty for making decisions from those who are responsible to those who merely want to participate. Secondly, time and money are often scarce, especially for public-interest groups, which often find themselves pitted against public bodies with funds, technical expertise and political knowledge. Thirdly, members of the public may feel with good reason, that the public body always has its mind made up before it undertakes the public participation program and that intervention, however necessary, may be

fruitless. On the other hand, public bodies may feel that public participation efforts will merely bring out opposition, not thoughtful discussion of alternatives or improvements. Finally, and this is especially true of large-scale, interjurisdictional issues such as water resources planning, the issues may be so numerous, diffuse and long-term in nature that it is difficult to mobilize people and money to undertake public participation. The result is "the tragedy of the commons" in which no one can afford to spend the time and money to intervene on behalf of our common natural heritage, with the result that its qualities are irreparably damaged.(1)

There is plenty of evidence, however, that effective public participation in the planning process clarifies issues, reduces misapprehensions, softens hardened and one-sided viewpoints and facilitates the resolution of differences. By providing opportunities for articulation of these diverse and strongly held views, public involvement can make for easier resolution of conflicts.

Adequate public participation requires rules.(2) Participation must begin early in the planning process. Notice must be provided to inform the publics of the planning activity and the opportunities for participation. Forums must be provided to have the views of publics heard throughout the planning process, especially preceding important decisions. Information should be complete, so participation can be informed, responsible and substantive. Planners must assimilate public

inputs and place them in perspective with all the other information which must be taken into account in making the decision. Final decisions should be made openly by the responsible officials. Schedules and deadlines should be set and kept to avoid delays and to permit early decisions.

The National Water Commission in the United States, which reported in 1972, set out key access points for public participation in the water resources planning process as follows:

- Planning agency communicates with publics concerning initial consideration of study, proposed scope and opportunities for public participation;
- Identification of study goals and objectives;
- Evaluation of resources; their availability and capability of meeting needs;
- Formulation and evaluation of alternative plans;
- Assessment of plans in light of costs and benefits in achieving originally hypothesized goals and objectives; and, as a result, reassessment of original goals and objectives;
- Reformulation and evaluation of alternative plans;
- Recommendation of a plan;
- Review of the plan. (3)

There are many techniques for public participation. Jerry Delli Priscoli (4) has attempted to evaluate various techniques for use in

achieving various goals. (see page 15) He has marked with an X those techniques which appear to be most effective in achieving certain goals. Thus, field techniques are best suited to evaluating broad service goals, workshops are best suited to water resources planning, and field offices for monitoring. Workshops, if properly structured with clearly defined roles and objectives, can provide interesting evaluations of alternatives, impact locations and potential reactions. They offer unique opportunities ranging from graphic display to encounter techniques. (5)

Similarly, such techniques as simulation, gaming and expert paneling can be used for technology assessment, research design, data generation and evaluation. Combined with workshops and citizen advisory committees, they help to develop value preference profiles on key issues.

The best technique to determine values and attitudes of widely distributed "regional publics" such as those in the Great Lakes Basin, the Great Plains or the St. Lawrence Watershed, is survey research. Specialized market research firms undertake specific survey packages, often attached to routine surveys which are conducted several times each year. Attitude, opinion and value surveys, when combined with theoretical research, can provide a solid foundation for policy and action. The weakness of such polls is that they are susceptible to media reports and can change drastically for a short period when an

TABLE 1
SUGGESTIVE RELATIONSHIP OF GOALS AND
POTENTIAL TECHNIQUES OF PUBLIC PARTICIPATION

GOALS / NIQUES	DATA GENERATING			EVALUATION			BROAD SERVICE			
	Needs Id.	Issue Id.	Goals Id.	Alternative Action	Impact Location	Impact Reactions	Sounding Board	Rep. Public	Public Acceptance	Broad Consen
CAC's							X	X	X	X
TA	X	X	X	X	X	X				
Monitoring System					X	X	X			
Advocacy				X		X	X	X	X	
Ombudsman						X	X	X		X
Telecomm.	X	X	X			X	X			
Part. Observ.	X	X	X		X	X				
Offices					X	X	X			
Workshops				X	X	X	X	X		
Demonst. Projects									X	X
Gaming				X	X	X				
Role Playing				X	X	X				
Mock Courts							X		X	
Brain-storming	X	X	X	X	X	X				
Delphi				X	X	X				
Policy Capturing	X	X	X				X			
Attitude & Opinion	X	X	X		X	X		X		
Value	X	X	X		X	X		X		
Mini	X	X	X		X	X		X		
Election Data		X	X		X	X		X		
Geo-Coding Census	X		X		X					
Secondary Survey	X	X	X							
Referendums	X	X	X					X	X	X
Votes								X	X	X
Campaign Issues								X	X	X

CAGs - Citizen's Advisory Committees (Groups)
TA - Technology Assessment
Mini - Mini Surveys

issue such as acid rain or toxic waste is "in the news". By the time longer-term policy action is taken, the public support may appear to have waned.

Once having established the goals, the best general policy is the use of multiple techniques built on the integration of a wide range of expertise, government officials and the general public. (6)

It is most important to distinquish when activity BY-people or a region is needed as opposed to data and projections ABOUT-people in a region. The first calls for selective recuitment of opinion-leading elites. The second requires social science expertise. Correct phasing of these elements in the decision-making environment is critical. (7)

Finally, multiple links between decision-makers and the publics should be maintained. No one group of citizens or techniques will be representative of the public, so several are essential to provide checks on individual sources. Public participation requires clear goals and a careful choice of techniques, or it can be dangerous to the democratic system itself. In the words of Samuel Huntington:

> "To the extent that Americans become carried away by their political ideals, they are in danger of doing away with their political institutions." (8)

5. CANADIAN ATTITUDES TO THE ENVIRONMENT AND WATER RESOURCES

The objective of public information programs is to provide the public with accurate material with which to form opinion. Public participation may occur because people feel the need to send their views to senior decision- makers, to ensure that action occurs in the direction they prefer. Public policymaking is no longer merely the domain of the senior politician or bureaucrat. The Canadian public has witnessed what it perceives as major policy errors in both Canada and the United States in recent years and there is deep skepticism about the quality of decision-making at the top. The informed and educated citizen wants to have sound information at the time policy is being made, and he/she wants a voice in final policy choices, without having to wait for years for an electoral opportunity to change governments.

This is not as new as it seems. Powerful voluntary (non-governmental) organizations have existed in this country since the mid-1800s. Many of them, such as the Mechanics' Institutes, the Workers' Educational Associations, the Grange, the Women's Institutes, Citizens' Forums, Canadian Association for Adult Education, Canadian Institute for International Affairs, Canadian Institute for Public Affairs, etc. were and are almost purely educational in nature, with most information flowing from the top down. Many others, however, including the Grain Growers' Grain Company, the Wheat Pools, the Federations of Agriculture, Farmers' Unions, Farm Radio Forums, labour

unions, Canadian Institute for Public Policy, Pollution and Energy Probe, National Survival Institute, various native organizations, etc., were and are intended to engage directly with governments in the process of developing and reflecting the opinions of various publics and ensuring that their views are taken into account in policymaking. Some of these have been single-topic, single-constituency or single-issue organizations, but many others have engaged in the evolution of policy over a broad range of issues.

The quality of the environment in general, and the condition of air and water in particular, began receiving keen attention in the late 1950s. "Silent Spring", a book on environmental degradation by United States writer Rachel Carson, focussed attention on the issue. In Canada, the National Film Board, Canadian Broadcasting Corporation (CBC) and other media, began to find and describe air and water quality issues in such industrial centres as Sarnia, Hamilton, Dunnville and even in remote locations (Long Harbour, Newfoundland, White Dog and Grassy Narrows Reserves, Ontario, and Yellowknife, N.W.T.) Medicine discovered allergies and their causes. Science discovered ways to measure emissions from stacks, ambient air quality, emissions from waste disposal discharges and ambient water quality. Technology was developed to obtain increasingly accurate readings, so the sampling of extremely small amounts of toxic substances in water became possible and practical. Science also began to discover the effects of mercury on the human brain, D.D.T. on reproduction,

thalidomide on cell development, dioxin, P.C.B. and diethylstilbestrol on the evolution of cancers. The public became aware of the rising acidity of water and its potentially disastrous effect when a toxic theshold would be reached. It became clear that a major constraint on economic growth would have to be the preservation of the environment, whatever the economic cost might be. A steadily rising standard of living is of little perceived benefit to a population whose life cycle could be shortened by the process of environmental degradation.

The result has been an escalation of long-term concern about the quality of the environment and especially of air and water. It was reflected in the Resources For Tomorrow Conference in 1962, the Pollution Conference in 1966 and the formation of the C.C.R.E.M. (Canadian Council of Resource and Environment Ministers). The formation of the Federal Department of the Environment and similar departments at the provincial level was the official sign of institutionalized public concern. The Stockholm Conference in 1972 reflected growing global awareness. A full range of environmental legislation was developed and brought into force in Canada during the 1970s and environmental regulation began in earnest. The university system established both undergraduate and graduate programs in environmental studies and environmental design, to provide trained practitioners in the holistic field of environmental studies, while traditional science and administrative studies faculties provided scientists and administrators. The media hired trained reporters to

maintain contact with all of their sources of information and to keep the public informed.

The result has been to develop a much higher level of interest in and concern about the environment. The average citizen is now aware that ten thousand new chemical compounds emerge each year from the laboratories. Of these, some will be valuable additions to the family of useful substances now is use. Many will be discarded as having no further use. Testing all the valuable or useful substances for potential toxicity of some kind at some further date is clearly impossible, either technically or financially. While much testing is done, everyone recognizes that there can be future discoveries about the impact of new materials (or older and more common ones) on some aspect of the biological cycle. People have lost confidence in the willingness or ability of the private businessman to abandon new materials merely because they are toxic or to take all possible steps to clean up his effluent. Since no businessman can clean up without raising his costs, people have turned their attention to government in an effort to legislate the careful testing of new compounds and the regulation of effluents into the environment. The process of bringing about a cleaner and healthier environment has turned out to be much more difficult and expensive than anyone expected, but it appears likely to continue. Businessmen have discovered that, so long as everyone must live by the new rules, no one suffers competitively. Recycling toxic wastes has turned out to be profitable, and the

development of new technology makes export sales possible.

Despite the progress that is being made, the level of interest in and concern about environmental issues is still high. Environment Canada subscribes to periodic surveys of public opinion: the CROP Report, the Canadian Trend Report, and the Decima Quarterly Report. Both CROP and Decima communicate the results of interviews held with representative samples of adult Canadians in which they are asked a series of questions on subjects ranging from politics and the economy to eating and reading habits. By posing the same questions over time, these two polls identify short and long-term trends in both public opinion and behaviour and analyze them according to a number of social and demographic factors. The CROP survey is taken five times per year, while the Decima poll occurs four times per year. The Trend Report studies the content of about 100 daily and weekly newspapers for the quality of coverage given to major subject areas and to the main topics within them. Based on the amount of coverage and analysis of the actual content, Trend identifies continuing and emerging issues and concerns.

In reading the following poll results, it is important to keep in mind the transitory nature of public attitudes. People respond to pollsters with answers which often reflect the morning paper or the Journal the night before. Nevertheless, there is consistency in the growth of concern about environmental quality and in the desire of

Canadians to put the environment close to the top of all priorities of government.

Recent trends show a growing sense that government is incapable of dealing with economic issues, but should be responsible for environmental ones. While small business is preferred to big business, both are seen as largely self-serving. There is a growing belief in "voluntarism" - the belief that individuals can influence government and business and can help one another through voluntary group action, rather than through elected officials or other traditional institutions. This trend is ascribed to the public perception that the government and other institutions have failed to meet their needs in economic hard times. Canadians are therefore questioning the role of government and its attendant costs. Sixty percent (60%) of those interviewed told CROP in October 1984, that government is too involved in the lives of Canadians. Decima reports that seventy-nine percent (79%) of Canadians feel the Federal Government is doing a poor job of controlling its spending.

All the surveys show a strong consensus on the need for co-operation, consultation and the breaking down of artificial barriers, especially among governments, industry and labour. People are almost as interested in the decision-making process as they are in the final decision.

The three surveys reflect growing concern about the environment and a demand for government initiative. One in four Canadians identify the environment as the most important non-economic issue which should receive attention. Press coverage of environment issues has risen forty percent (40%) between 1983 and 1984. There is a strong demand for long-term "prevention policies" rather than crisis intervention and a "multiple-issue approach" which recognizes the interrelationship of environment problems. Concerns are broadening from the national to the international level, reflecting the emergence of concerns about the ozone layer, the greenhouse effect and acid rain.

Seventy-one percent (71%) of Canadians do not believe we have to accept higher pollution levels to provide for our future needs. Eighty percent (80%) of Canadians in the most recent Decima poll believe "protecting the environment" is primarily the responsibility of government, with only eleven percent (11%) identifying industry and six percent (6%) the voluntary sector. Government's role should be regulatory and monitoring, rather than financing. Big business, according to eighty-nine percent (89%) of those polled by CROP, should take the responsibility for actually implementing and paying for pollution control measures. Only fifteen percent (15%) of Canadians favour using tax dollars to subsidize pollution reduction.

Trend Report and CROP agree on the three priority issues of public

concern; water pollution, acid rain, and toxic chemicals. The public is increasingly concerned with water and health, not only with the older question of sewage and its treatment, but with the "new" problems of the seepage of toxics from industrial waste sites and municipal dumps into drinking water supplies. Seventy-four percent (74%) are extremely concerned about air pollution and acid rain (80% in Ontario, 84% in Quebec) and potential human effects. There is broad support for the view that the source in both Canada and the United States should be cleaned up as quickly as possible.

It is obvious that public information and participation programs are of extreme interest and importance in the management of issues and the evolution of policy. There is ample evidence of the staying power and enduring strength of the public's environmental concerns. Canadian Trend, in a recent report to Environment Canada, made a number of sensible recommendations. (9)

1. Environmental issues should be addressed on a long-term basis. Both leadership and commitment must be demonstrated. Short-term or narrow remedial strategies which ignore the rights of future generations will backfire.

2. In Canada, "environmentalists" are not narrow, single-issue, special interest extremists, but middle-class Canadians. All environmental issues will get a high profile in the media because

there is a huge audience of Canadians who identify on a deeply personal level with environmental issues and who project their concerns further into the future, as concern for the welfare of their families. This politicization is unlikely to be reversed.

3. Economic and social concerns blend with environmental concerns. Education, environmental protection and labour adjustment to technology, for instance, are all seen as intimately interrelated with the public notion of "environmental". Attempts to couch environmental concerns in terms of "jobs versus the environment" are likely to fall flat.

4. Environmental questions are especially sensitive and emotional because of the pervasive and intensifying concern about the future for today's youth. Professional terms such as "exploitation", "mutation" and "sterilization" are likely to conjure up terrifying, negative images for the average Canadian.

5. There is a receptive climate for bold initiatives and pro-active approaches. Canadians are far ahead of policymakers in their willingness to advance new, innovative environmental policies. The public's view of what is "actionable" needs to be heard.

6. Non-confrontational, open approaches to policymaking, that stress the legitimacy of all interests and the need for collaborative

development of new policies for an era of transition will resonate favourably with the Canadian public. Canadians believe that environmental questions are moral values accessible to all, rather than a subject for experts alone. Environmental decisions, whether within public or private institutions, are expected to be accessible, open to view and participation and responsive to public input.

7. Both "top-down" and "bottom-up" communication processes must be used. The most successful strategy and communications policy is one that builds out horizontally among employee groups and colleagues rather than one that is orchestrated down from senior management, professionals or experts, or one that is shaped only from "bottom-up" pressures from special interest groups. A sound, pervasive and workable environmental strategy requires communication and mutual action at all levels in the system.

6. THE WORKSHOP

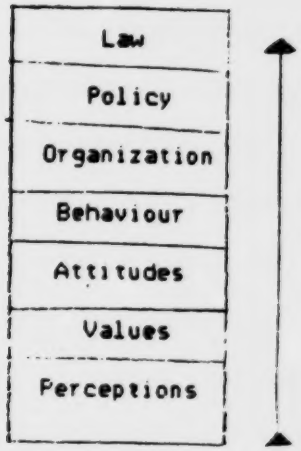
Because of its small size, the workshop did not break into small groups, nor did it complete all the steps of the proposed agenda. Three of the five themes were covered:

1. The Situation We Are In and Where It Will Lead If Present Trends Continue;
2. The Desirable Future;
3. Options and Recommendations.

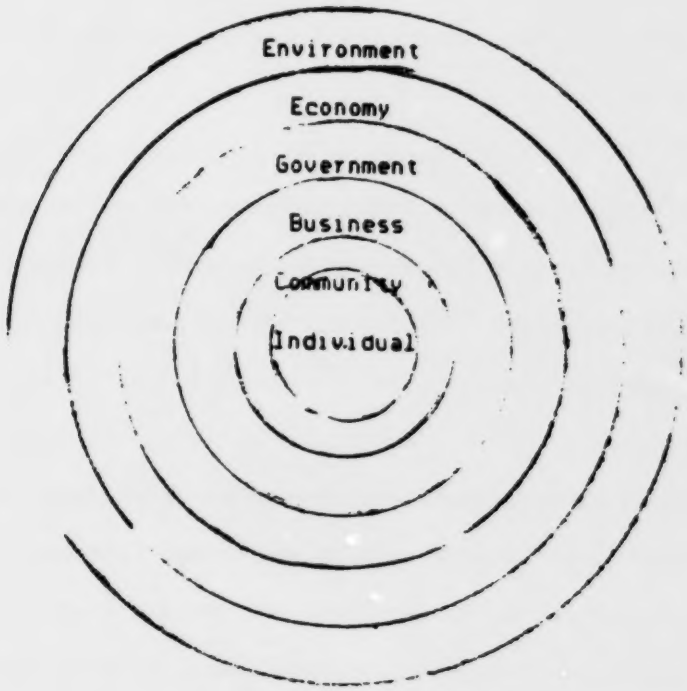
1. THE SITUATION WE ARE IN AND WHERE IT WILL LEAD IF PRESENT TRENDS CONTINUE

The following summary of the discussion was prepared from the flip charts used to record group dicussion.

An initial presentation was made by Charles Fremes of Decima Research. He showed a model of public policymaking in which a hierarchy of factors, beginning with public perceptions, values and attitudes leads to the evolution of public policy and law. The concept was shown as follows.



A second way of showing how public perception becomes the basis for policymaking and the formulation of laws might be:



Recent polls by a number of polling firms (Decima, Canadian Trends, CROP) were reviewed (see previous chapter) and their

implications examined in detail. Extensive discussion about the perceived relationship between the environment and the economy resulted in general agreement that a clean environment and a growing and productive economy should be jointly pursued. If both goals cannot be achieved together, the goal of environmental protection and the maintenance of a clean environment should rank ahead of the goal of a sound and productive economy.

Fremes made the point that underlying values are much slower to change than attitudes, and form the bedrock of public policy. Attitudes may move as issues (acid rain, etc.) are identified, while values (basic concern about nature and the quality of the environment) remain constant.

Current Canadian priorities centre on finding a means to resolving conflict and confrontation by reconciling the interests of the contending forces in society and to find consensus on goals and the policies needed to achieve them.

Canadians have a strong commitment to equity as a value, but recent polls show that attitudes are moving from support for expanded governmental activity to achieve equity to a public acceptance that reduced Federal government services may be necessary and that the pursuit of equity may have to be attempted by other levels of government, and by labour and the private sector. There is growing

concern with the deficit as a national problem and nearly eighty-five percent (85%) of those polled believe that the size of government and the quality of management in government is the main cause of the deficit. A similar number of people support cuts in programs which do not affect them personally.

An overwhelming majority of Canadians regard environmental issues as either very important or important. Regarded as very important or important are water pollution (96%), air pollution (93%), chemical or toxic wastes (90%), chemicals in food (92%), acid rain (87%), and oil spills (87%). "People in Canada believe they're entitled to the cleanest water in the world".

Canadians have developed clear-cut views about the credibility of information. Forty-six percent (46%) trust environmental groups, thirty-five percent (35%) trust government statistics and statements, and thirteen percent (13%) trust statements of private sector organizations and their representatives.

To solve problems, Canadians take individual action (7%), join an existing group (48%), form a new group (20%) or turn to their political leaders to find a solution (24%).

Canadians believe the private sector should be responsible for preventing pollution (39%) but if the private sector fails to take

action, it should be the responsibility of the Federal Government (23%), the provincial government (20%), or the private citizen (15%), to take action. In the past two years, attitudes have shifted responsibility slightly from the Federal Government and the individual to the provinces and private industry.

If environmental standards cannot be met by industry, and if the decision is to close a plant or take action to keep it open by having government pay part of the cost of renovation, fifty-seven percent (57%) of Canadians prefer to keep the plant open and have government pay part of the cost of renovation; thirty-four (34%) prefer to force the plant to close and five percent (5%) are prepared to have it remain open without renovation, in order to preserve jobs.

When asked whether environmental protection should be relaxed in order to promote economic growth, eighty-six percent (86%) of Canadians support present levels of protection, and only thirteen percent (13%) believe present environmental legislation should be relaxed to help the economy expand. If the choice is between protecting the environment and facing higher prices or reducing protection and enjoying lower prices, eighty-three percent (83%) of Canadians prefer to face higher prices. If the choice is between protecting the environment or reducing the number of jobs available, sixty-four percent (64%) vote to protect the environment and twenty-seven percent (27%) favour protection to be reduced to generate jobs.

These responses are unique. No other topic generates such strong and sustained commitment. Environmental protection appears to be closer to a value than an attitude among Canadians and in general, commitment to it has actually grown during the recent recession. Even among values, commitment to it ranks with Canadians among such values as participation, equality, and family. There is the basis for a powerful, national effort, shared by all individuals and groups, to maintain and improve the environment.

The presentation led to an extensive discussion of the present situation and probable future directions if present trends continue. The Big Generation of highly educated, young urban professionals have become the largest voting group and will remain in this position throughout their life cycle. They can be expected to be well-informed, participative and politically active. There was extensive discussion about the possible impact of their involvement in business, provincial and federal governments and non-governmental organizations over the next few years. Present models of public participation were developed during the late 1960s and 1970s, in response to an intense public desire to participate in policy development. Since 1980, there has been a reduction in the intensity of interest in direct participation, with the possible exception of such highly-charged issues as toxic wastes and acid rain. Even though most Canadians favour clean and abundant water supplies, etc., participation at the open hearings of

the Inquiry has been very disappointing.

One problem may be that people are not sure what an improved system of water and land management would be like. How would it operate? Who would have jurisdiction? What rights and privileges now enjoyed by Canadians would be reduced if it were implemented? Would it accomplish useful objectives with respect to our position within the continental water system?

If the environmental ethic is so strong, why has the current government chosen to make severe cuts in the budget of Environment Canada? Will these cuts have serious potential to damage programs which Canadians regard as essential? Is there sufficient fat in the Department of the Environment to absorb cuts without loss of environmental protection? Is it possible for the private sector, labour, non-governmental organizations and individuals to take larger responsiblity, thus allowing federal expenditures on environmental protection to be reduced without damage? What is necessry to change individual, corporate and governmental behaviour in line with the apparent environmental value or ethic which the polls appear to show? What kind of public participation system would be needed to mobilize such widespread change of behaviour?

A lengthy discussion followed about United States attitudes to environment, and especially to water resources. The United States

Clean Water Act was passed in the late 1970s with the objective of ending all toxic discharges into waterways by 1985. This goal has since been abandoned, as the full cost of accomplishing it has become clearer. The Act may be unenforceable, since it is probably technically and economically impossible to remove 100% of pollution from water. A lesser objective (95%) may be technically and economically feasible and may be equally acceptable to the public. An economic impact statement is now routinely prepared on every new piece of environmental legislation brought forward in the United States. It examines the impact on jobs and the economy and reflects the United States decision to put economic growth and job creation ahead of environment protection. This mandate from the United States voters elected Reagan and seems likely to remain in place for some time.

A major problem with respect to public understanding of environmental issues and the development of suitable public participation programs is that many questions cannot be answered with current scientific knowledge. Toxic substances cannot always be identified until they are in widespread use and their effects have pervaded the system. Up to 10,000 new chemical compounds are identified in the laboratories of the world each year and it is not possible to subject all of them to long-term testing before introduction. Much more knowledge is required before levels of risk can be positively established. There are few mechanisms by which the public can interact with scientists to describe their needs for

information.

Canadians are perceived to be scientific illiterates. It could take from twenty to forty years to make most Canadians aware of the scientific realities of environmental issues. Reliable information is not available for either students or adults, either on the scientific basis for environmental realities or on means by which environmental damage can be avoided. The result is that most people simply do not know how to respond to their institutions and governments, other than to say they prefer a clean environment to a dangerous, dirty and toxic one. Ways must be found to extract more information from scientists and governments and to digest it for public use.

The role of the Inquiry received extensive attention. It was felt that the public lacks a clear definiton of its role, and this might account for the limited attendance at hearings. Seven out of twelve provinces and territories presented briefs. Of the five that did not, three responded that the issue of water was a provincial responsibility under the Constitution and was therefore not the proper subject of Federal examination. Two hundred and fifty briefs were submitted by public interest groups. Press reaction has been good, but local in nature, focussing mostly on the content of briefs submitted locally and not on national and international issues. It was agreed that the Inquiry had a most important consultative role to play; that it could have a profound impact on public attitudes to water resource

quality and supply, and that it should recommend a range of strategic and practical programs which Canadians, their organizations and governments, could implement. It is essential that it be taken seriously by all levels of government. This means that academics, consultants, heads of agencies with reponsibility for water resources, as well as the public, must be convinced by the Inquiry Report. Change but not panic should be the goal. A change in long-term cultural behaviour is required in Canadian society to achieve it.

2. THE DESIRABLE FUTURE

The desirable future should include environmental accomplishments such as; safe drinking water for all Canadians, safe habitat for fish, the resolution of trans-boundary water issues between the United States and Canada, the development of widespread public participation systems to allow Canadians to intervene in policymaking and the completion of a powerful, technically sound report by the Inquiry which could be used across Canada for public information and participation.

The group examined each of these important goals in turn.

With respect to the provision of safe drinking water for all Canadians, it will be necessary to eliminate the widespread pollution of Canadian water sources by both domestic and United States polluters. Lake Ontario water is being polluted continuously, mostly from the United States side, and its condition grows steadily worse. A desirable future would lead to resolution of such situations, by means of national and international media campaigns and direct-mail solicitation, especially with elected United States officials. The development of a Clean-Water Act similar to the Clean-Air Act, will be required.

One group member expressed the strongly-held view that we have deluded ourselves by believing that "environmental management" is

possible and sufficient to restore our environment to a healthy and satisfactory state. Such "management" has been dominated by economic imperatives and therefore has fallen far short of the "environmental nurturing" which is needed if the environment is to be maintained and restored to a healthy and sustainable state. Since governments seem unwilling to assume this role, it is imperative that non-governmental organizations assume the nurturing role. Young people, women and others must develop groups aimed at raising the consciousness of the society with respect to the environment, with the goal of developing a new environmental paradigm, or world-view, which clearly puts the quality of the environment ahead of economic issues. "Soft environment paths" must be developed, in contrast to the path of environmental protection legislation, which industry and government seem to prefer.

Such "soft paths" might involve smaller-scale, cleaner technology which recycle all effluents or confine them for safe disposal. They should be developed for both small and large companies and would be self-financing or perhaps aided by government, as large installations often are for big industry. They should be environmentally benign and compatible with larger systems, and should be capable of substantial long-term environmental savings. They would be the technological extension of the "conserver society" in which recycling, reduction, reclamation, reuse, and replacement are the key concepts.

To achieve such a desirable future, it will be necessary to make

it possible for the urban householder - whether an owner or a tenant - to be aware of what goes into his home and what comes out. At the moment, few people can obtain such information. It is not possible to compare one's pollution with "normal" levels by others, nor to rate household equipment according to its frugality of water use, or its impact on the quality of water leaving the home. Unlike metering systems for gas or electricity or the technology used in cars and equipment, technologies are not in use to report on efficiency of water use or the quality of effluent, nor are large central systems able to reward conservers nor to punish over-users or polluters. There is no conscious knowledge of the impact of hazardous household wastes on the water environment. Urban people have lost contact with their water environment, in terms of volume, scarcity, and price. It should be a major goal of the Inquiry to bring them into contact with the realities of their water environment.

In a desirable future, large issues and their resolution should be connected directly to the "realities of living". People have the capacity to implement solutions if they understand and become concerned about a problem and have knowledge of the consequences of their personal actions and the steps necessary to change them in the direction of a cleaner environment. Although price is the usual signal, other signals may be needed.

In a desirable future, publishers of all forms of literature,

including educational texts and children's books, will be involved. There is at present a limited market in Canada, but the Great Lakes Basin market would be much larger. The St. Lawrence Basin or the Great Plains Region would also constitute a large market. It is essential to define common ground, where the focus is an environmental community, centred on a shared resource with less concern for the Canada-United States border. Then specific publics can be targeted by publishers, cable television, and other media. Publics would include private citizens, rural and urban community leaders, industry leaders, professionals, government, and academic leaders.

It was suggested that a desirable approach might resemble the drunk-driving campaigns which have been launched. The "Aware" program in Saskatchewan was lauded as one of the best in Canada and a possible model for future "water-awareness" programs. Politicians must be convinced by grass-roots pressure and action that water issues are extremely important to Canadians. Clean water must be seen as both a health and an environmental issue, since lakes, streams and groundwater provide the source of most drinking water for Canadians. Bottled water may not be a useful answer, since few sources remain which are uncontaminated by toxic chemicals.

In a desirable future, programs would be practical, irresistable to government and would involve a number of powerful institutions in the evolution of program recommendations. Programs need to achieve

legitimacy and support by media, local and provincial governments and key private and non-governmental institutions. These institutions must be convinced that unless action is taken, environmental conditions will deteriorate further and human health will be further endangered. The media will be an essential ally, since one of their major goals is to gain government attention.

In a desirable future, the Great Lakes Basin and the Great Plains Region would receive much more attention. The Great Lakes Water Quality Agreement is currently up for renegotiation and the Inquiry could make an important impact on its final form. The Agreement is a critically important political agreement between the two countries and involves re-convincing both governments to renew their commitments to water quality in the Great Lakes. Despite the past Agreements, however, water quality is deteriorating. More research is needed, information must be more openly shared, institutions must be improved and legislation must be updated.

An ideal future might involve a Great Lakes Celebration for example, in which an image of this great inland sea would be created in the minds of millions of Canadians and Americans. It would be an opportunity for people in the Great Lakes Basin to talk across their borders with each other, to discover the region in a holistic way, to develop channels (radio and television) for people to talk to each other about the future of the region. Cities could be twinned, and

organizations and institutions would exchange information about their shared water heritage. It could be launched with a giant water-based exchange in which yacht clubs, boating organizations, training ships and the like would take the lead to begin the exploratory process. Over five years, organizational development could take place with travelling exhibits, mass information and participation programs. The overall goal would be to resolve and revolutionize waste disposal habits in the Great Lakes Region, to clean up drinking water and to make people aware of their water system as they are now aware of the land on which they live.

An organization called Great Lakes United, involving one hundred voluntarily linked groups in the Great Lakes Basin, is at work on large-scale questions of this sort. They have generated learning groups involving all ages and are now working on a plan to obtain social and political expression.

An example is the Qu'Appelle project in Saskatchewan, in which the five lakes in central Saskatchewan have become the focus of attention. They are seriously polluted, but remain the favoured vacation resort area in southern Saskatchewan. A citizen's group has organized to involve all stakeholders - farmers, local Indian leaders, municipalities, tourist operators - to clean up pollution sources and to bring about a new consciousness about the necessity for higher water quality. A similar organization is being set up in the Red River

Basin to involve as many stakeholders as possible.

The Centre for the Great Lakes was organized two years ago at a conference on the Great Lake Basin. it is independently funded and is intended to examine resource and development issues in the Great Lakes. The goal is to achieve new commitment and awareness of the water system, using research and public participation programs. The lakes are perceived as underpinning future economic growth in the region, but to the surprise of the Centre, the Great Lakes seem to have been largely ignored by key decisionmakers such as local industrialists, mayors, legislators and governors. Initial funding has been obtained from foundations, but more funding is needed at a national level and Inquiry support could be valuable. Individual assistance to the Centre might be expanded if donations could be deducted for tax purposes.

The desirable future will require both mass and independent action as well as regulation and legislation to support the cleanup of critical areas. Legislation and regulation await public education and consultation but could move ahead quickly with government support. When this has been done, governments should continue their efforts by facilitating and nurturing private group action, but should not try to control such supportive action.

To achieve the desirable future will not be easy. Ontario Waste

Management Corporation (OWMC) has attempted to present its case to the public and to solicit public input at each step in the process of selecting a site for processing toxic wastes. However, it is opposed by the tourism lobby, despite the fact that successful toxic processing would lead to cleaner water and ultimately, a stronger tourist industry. The Inquiry will need to take its case to all media in both the United States and Canada, to obtain major coverage on talk shows, to lobby with key institutions. Environmental pressure will be needed if change is to occur.

3. CONSTRAINTS, OPPORTUNITIES AND RECOMMENDATIONS

The final session of the workshop focussed on identifying key constraints on the Inquiry, opportunities to deal effectively with them, and recommendations for action. It proved to be difficult to keep these three categories separate and the discussion of constraints, opportunities and the nature of necessary action often occurred concurrently. The following pages are not therefore as neatly divided as one might hope.

A constraint on public participation with the Inquiry has been a lack of information about the role of the Inquiry, its mandate and objectives. It has not been entirely clear whether the Inquiry is intended to collect information, consult with the community or prepare a report for ingestion by the community. It was agreed that it should attempt to do all three.

A constraint on the widespread publication of water and environmental materials is that a market has not been created. Most people need to be alerted to the existence of issues in the society (racism, multiculturalism, equal opportunity, etc.). To a great extent, government fosters and the media and school curricula reflect the awakening of the public to such issues. The Department of the Environment (D.O.E.) has not been effective in fostering the necessary awakening of the Canadian public to water and environmental issues.

No long-term plan exists for information about inland waters. There is no evaluation of the usefulness of the information programs which exist. There is no money for more systematic programs. Existing programs are divided among many branches and between Ottawa and the regions. Budgets are similarly divided, and no rationale exists for the present budget division. Budgets for information are very low; less than one percent (1%) ($6 million per year out of a total budget of $800 millions per year) of the Department of the Environment's overall budget. Crisis management has dominated activities at D.O.E.

Opportunities and recommendations became indistinguishable in the final stages of the discussion and are reproduced more or less as they were transcribed.

The Commission should show clearly the global water frame which surrounds the continental and Canadian situation. The greenhouse effect, the trade-offs between world food production and water use, the rapid growth in global and continental population and the implications for water resources should be set out in a clear and simple manner.

The Canadian water situation should then be set out in detail, with forecasts until 2025 or 2050. Scenarios with respect to continental population shifts should be outlined, regional pressure points identified, (British Columbia, High Plains, Southwestern United

States, Great Lakes Basin). Water supply-and-use maps should be provided; principles and guidelines defined for water-short regions and the reader should be projected forward from his present water-use pattern to his probable water consumption patterns past the year 2000, if nothing is done. The potential health effects of increasing levels of toxic materials in the water supply should be set out clearly and simply.

The report must not only communicate to the Minister and the provincial Ministers, but to special-interest audiences (farmers, industry, educators, non-governmental organizations, media). Separate documents (texts, "fast-food" documents, cartoons, etc.) should be prepared to offer the same message in other forms to audiences such as "average Canadians" and school children. Interest and trust developed at the point of release and during the follow-up period will determine the long-term value of the Inquiry. Key groups should be brought together at the time the report is released to plan follow-up so that action begins immediately. Environment Canada should take the initiative to ensure that this occurs.

If the Inquiry is to result in the evolution of a new ethic with respect to water, it is important that careful planning for the release of the report should take place now. The Inquiry should decide how the public awareness program is to be carried out and who should do it. Participaction might be a suitable model, since it was also a program

directed to the individual and his/her behaviour. The environmental message must be: "We have serious water problems facing us in the future. I can take daily action to clean up and conserve water. This is how I can do it." This helps the individual to make a positive contribution and to develop a sense of accomplishment by doing so.

The second objective of the Inquiry should be to develop action by major polluters and water users. Industries and farms need facts about the consequences of their present water-use actions. Conservation authorities should be assisted and encouraged to strengthen education and participation activities. Demonstrations should show how the individual interacts with the water system throughout his life cycle. He should be reminded that eighty percent (80%) of his body weight consists of water, which leaves in his system most of the heavy metals and chemical contaminants which he ingests with it. The report should assist the individual to compare his/her behaviour against that of others, with respect to personal habits, household systems, community systems, watershed systems, and the national system.

The report should talk about risk management. People live not by profit maximization but by personal risk management. They prefer a zero risk from hazardous wastes and from their water supply. Toxics in water are not all identifiable nor recognized and while the citizen is unaware of the invisible risks in water, he is being reminded by the media that new risks are being added daily which are beyond the ability

of science and mathematics to calculate. He will look to the Inquiry and after it work is done, to government for guidance on what should be done.

The Inquiry should recommend the establishment of methods for assessing water-using or water-contaminating home products for their impact. The process should not be more difficult than calculating energy use and would allow the householder to select the least-polluting and least water-using appliances and systems for the home and business.

The Inquiry should examine D.O.E.'s role in public information, education and public participation in the water area. Present weaknesses should be identified and recommendations made to ensure that D.O.E. has the resources necessary to establish water research, monitoring and public information at the top of its list of priorities. The acid rain situation proves that D.O.E. can handle topical issues effectively. Similar resources and priority should be given to water supply and pollution abatement.

The Inquiry should examine the relationship between D.O.E. and the provincial and municipal governments which have constitutional and operational responsibility for water. A process for developing public consensus on action should be developed, to involve all levels and involving input from all key stakeholders. If symbolic presence is

needed to set the context for a national program of water-use and water cleanup, should it be the Federal Cabinet itself, rather than D.O.E.? It is essential that water and environmental issues take precedence over financial issues and the departments that represent them in the Federal Government.

In its relationship to the provinces, D.O.E. should be "first among equals" in sharing information, providing a court of last resort if provincial agreement is not possible and in taking action on long-term planning and in the resolution of crises.

Research was discussed at length. Much more is needed, but the group was not sure how it should be co-ordinated. Specific responsibility for watersheds should remain at the regional level. Shared responsibility should involve centrally established standards (D.O.E.); regional management (provinces) and local implementation (the evolution of a low-use, no-pollution ethic with supporting water-use practices, backed up by regulation).

Funding a national water program of this kind may require a federal tax on water use. It was observed that water is so cheap that most people have no idea what it costs and have no conservation ethic (as they do with electicity, oil, natural gas, or gasoline). A national funding base would support the national programs identified here and would permit funding regional and local initiatives. It might

be desirable to create some kind of National Water Commission if it is not possible to bring D.O.E. to the point of view discussed above.

A National Water Commission could follow up the Inquiry in an effective way, to develop uniform data collection standards and a national water data bank; to work with all stakeholders in the national water system, (provinces, watershed authorities, industries, farm organizations, consumers), to develop a climate of awareness, consultation, trust and joint action by informed Canadians to ensure that the findings of the Inquiry will be implemented and that Canadians are kept in touch with the water which surrounds them and the decisions which must be made to keep it abundant and clean.

7. CONCLUSIONS

Work on this project had to be completed in just seven weeks from the granting of the contract until the completion date. It was therefore impossible to conduct any original research. Instead, a number of intensive interviews were conducted, available materials were collected and the Background Document for the search conference was assembled. In this process, it was discovered that an enormous literature exists on public information and participation processes in the United States and Canada for the period 1970 to 1984. Despite the abundance of the literature, very little research has been done to evaluate public information and public participation programs. Their range and variety, coupled with the need to fit them specifically to individual circumstances, makes them uniquely difficult to evaluate. Nevertheless, it is clearly time that greater effort was made to systematically evaluate such programs on a regular basis.

Environment Canada now spends an estimated $6 millions per year out of an annual budget of $800 millions on public information and public participation. I could not find any evidence of systematic and routine evaluation of these programs to determine their effect and value. In general, it appears that the programs have been quite effective in raising public consciousness about environmental issues such as acid rain, the preservation and conservation of natural resources, the evolution of the Parks Canada network, etc. In other

cases, the evidence is less clear that an effective and co-ordinated job is being done.

There is also evidence that the budget of $6 millions, or less than 1% of the departmental budget, is inadequate in view of the intense public concern about environmental issues. If public participation is seen as a window through which the people may influence the development of future envionmental programs, if it is seen as a means by which environmental policies can be developed and as a key element in co-ordinating environmental activities of citizens, industrial leaders, provincial and federal governments, then the budget is far too low. It may be that an expanded public participation budget is the key to lower long-term costs, if it will lead to widespread public understanding of and support for progressive environmental policies.

It appears that many Canadians lack reliable information on which to base their actions, as they attempt to contribute to a cleaner environment. They need better product information about the effects of individual items (auto exhaust emissions, furnace burner emissions, etc.) in order to select the cleanest products. They need better information about the toxic products they use and proper disposal methods. They need more information about toxic elements in their water supply and possible measures which might be taken. They need a "State of the Environment" report from government at regular intervals

to provide a sense of progress (or lack of progress) in the search for a cleaner environment. They need reliable data on water and air quality and the causes of deterioration in quality, so they can make decisions about agricultural practices, industrial location, process design, equipment selection, and the like. They need an economic system which rewards the user of cleaner products and punishes the user of polluting products.

With respect to water resource issues specifically, it is difficult for Canadians to obtain information about the long-term water demand and supply picture for specific areas of the country (Prairies, Northern Canada, Central Ontario, etc.). There has been little effort to connect long-term continental population changes with long-term water supply and demand, so individual Canadians lack a clear picture of the water system and the areas where changes in policies and practices will be required.

Through the efforts of such institutions as the Canada Centre for Inland Waters, the Great Lakes Region and environmental issues generally are much better known and understood. However, the information often reaches the public as "scare headlines", instead of in a more thorough and orderly fashion. This in turn helps to cause the crises with which Environment Canada seems to be occupied most of the time.

Since early in 1984, a new series of high level "consultative processes" have been undertaken by Environment Canada, involving senior provincial environmental officials, industrial and labour leaders and academics. These processes are achieving consensus on action to reduce water and air pollution at source. Task Forces are currently at work on specific steps required to deal with toxic wastes, to develop a sound data base, to develop a "state of the environment" report and to develop a working basis for industry, labour and government collaboration on the environment. Although it is too soon to evaluate these "consultative processes", it may be that this is the prototype for expanded public participation processes of the future, involving municipal, voluntary organization and media leaders who in turn could extend the process.

The development of institutions such as Pollution Probe, the Centre for the Great Lakes, the Great Lakes Institute, etc. indicates that citizen interest is growing, not abating. It is essential that Environment Canada take the lead in providing reliable material for these organizations, together with support for information and public participation processes which they will undertake.

8. RECOMMENDATIONS

1. That the Federal Department of the Environment develop a reliable and trustworthy data base on the environment (water and air quality, etc.) and make it widely available for public use.

2. That the D.O.E. publish a State of the Environment report at least biennially, to provide a benchmark for all citizens on the progress being made toward a cleaner environment.

3. That D.O.E. further support and develop a wide range of "consultative processes" to involve all levels of government, industry, labour and academics, non-governmental organizations and citizen leaders in the evolution of efforts leading to a cleaner environment.

4. That D.O.E. conduct a systematic evaluation of its public information and public participation programs to determine which are most useful and to focus resources on these programs.

5. That D.O.E. argue for the necessary resources for a much-expanded public information and public participation process, centred on the most effective and useful programs.

6. That a National Water Commission or National Water Council be

created to represent all major stakeholders in the national water system. The Commission or Council should have the following responsibilities:

a. to implement the measures recommended by the Inquiry on Federal Water Policy.

b. to develop a long-term (30 to 50 years) perspective, data bank and plan for water use in Canada. This should include forecasts of population growth, demand, supply and quality of surface and groundwater in Canada, and should outline the long-term implications for consumers, agriculture and industry and short-term policy and program implications.

c. to develop public information and public participation programs to ensure that every Canadian understands water supply, demand and quality issues and is able to make rational and constructive personal, corporate and institutional choices, which will in the aggregate, lead to desirable policy outcomes.

d. to assist in the development of a public understanding of the key watersheds in Canada, including the Great Lakes, the High Plains, the Pacific Region and the North (Mackenzie); their vulnerability and private and public measures required to ensure a sustainable water environment.

e. to work closely with all levels of government (D.O.E., provinces, municipalities) to ensure that water-related public information and participation programs are

consistent, properly organized and managed and that a proper balance is maintained between "top-down" and "bottom-up" programs.

f. to evaluate public information and participation programs of various levels of government relating to water and to suggest improvements.

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APPENDIX 3

Terms of Reference

Objective

The Inquiry on Federal Water Policy, established by the federal Minister of the Environment, has approved the following undertakings by Canadian International Consulting Economists focussed on a project "Public Information and Consultation in Water Management".

Tasks

1. Assembly of relevant surveys, recent papers, etc., and preparation of a background document which sets out key issues and recent experience in Canada and other countries concerning public participation in policy development and environmental issues.

2. Review and evaluation of federal government provisions for public information and consultation on matters relating to water management, including consultants, advisory groups, and publication sponsored by various agencies.

3. Organization of a small workshop involving 10 to 12 experts who would interact with Inquiry members in considering different scenarios and building an appropriate policy.

4. Recommendation of feasible policies and programs which could be adopted or expanded to improve public awareness, understanding and participation.